

They Glorify Their Native Country by Labor

27-9-5/30

(Latvian SSR) and Mogilev (Belorussian SSR) are also mentioned as praiseworthy. The schools of the Novosibirsk Oblast Administration of Labor Reserves (Novosibirskoye oblastnoye upravleniye trudovykh rezervov) arranged lectures and discussions on the events of October 1917. The Voroshilovgrad- and Kiyev Administrations of Labor Reserves (Voroshilovgradskoye i Kiyevskoye upravleniya trudovykh rezervov) announced a competition for the best-arranged school territory and sport buildings. The Railroad School Nr. 1 at Chernovtsy (Zheleznodorozhnoye uchilishche Nr. 1, g. Chernovtsy) decided to build a water basin 25 x 15 meters.

AVAILABLE: Library of Congress

Card 2/2

LEYCHENKOVA, K,

AUTHOR: Leychenkova, K.

27-4-21/25

TITLE: The International Exhibition in Brussels (Vsemirnaya vystavka v Bryussele)

PERIODICAL: Professional'no-Tekhnicheskoye Obrazovaniye, 1958, # 4,
p 28-29 (USSR)

ABSTRACT: This is a general description of the Soviet exhibits at the
Brussels Exhibition, which are listed in some detail.
There are 4 photographs.

AVAILABLE: Library of Congress

Card 1/1

AUTHOR: Leychenkova, K. SOV/27-58-11-17/29
TITLE: Large-Circulation Newspapers of the Labor Reserves (Mnogotirazhnyye gazety trudovykh rezervov)
PERIODICAL: Professional'no - tekhnicheskoye obrazovaniye, 1958, Nr 11, pp 20 - 22 (USSR)
ABSTRACT: The Oblast', Kray and Republic Administrations of the Labor Reserves are publishing newspapers with a large circulation, which, if given the appropriate trend, will be of help to the pedagogical staff of schools in training highly qualified young workmen. The article gives a review of the papers. The author mentions the close liaison between the editor and the readers as being most important. As an example he mentions the "Trudovyye rezervy" of the Altayskoye krayevoye upravleniye (Altay Kray Administration). Another paper mentioned is that of the Latvian Republic Administration "Ruki molodyye". It is published weekly on 4 and sometimes 8 pages in the Latvian and Russian languages. A negative criticism is given to the Stalingrad Oblast', the

Card 1/2

Large-Circulation Newspapers of the Labor Reserves

SOV/27-58-11-17/29

Novosibirsk Oblast; and the Kazakh Republic newspapers. The author also deals with the outer appearance of a newspaper and the composition of the editorial staff.

1. Industrial training--USSR
2. Newspapers--USSR

Card 2/2

LEYCHIK, G.

Specialization among enterprises of the Stalingrad Building Elements
Trust. Na stroi.Ros. no.3:18-19 Mr '61. (MIRA 14:6)

1. Glavnyy inzhener tresta Stalingradstroykonstruktsiya.
(Stalingrad—Construction industry)

LEYCHIK, M. S., Doc Med Sci -- (diss) "Form, Size and Projection
of the Tracheobronchial Stem and Operative Approaches to Stem
Bronchi." Stalino, 1957. 27 pp (Stalino State Medical Inst im
A. M. Gor'kiy), 200 copies (KL, 48-57, 109)

- 60 -

LEYCHIK, M.S., dotsent

Activity of the Donetsk Province Society of Surgeons in 1961.
Klin.khir. no.12:87-89 D '62. (MIRA 16:2)

1. Chlen pravleniya Donetskogo oblastnogo obshchestva khirurgov.
(DONETSK PROVINCE—SURGICAL SOCIETIES)

AGAMOVA, K.A.; LEYCHIK, S.V.

Use of phase contrast microscopy for the cytological diagnosis of
bronchopulmonary cancer. Lab. delo 6 no.4:3-7 J1-Ag '60.
(MIRA 13:12)

1. Kliniko—diagnosticheskaya laboratoriya (zav. N.N.Shiller-Volkova)
Gosudarstvennogo onkologicheskogo instituta imeni P.A.Gertsena (dir.
prof. A.N. Novikov) Moskva.
(PHASE MICROSCOPE) (LUNGS—CANCER)

LEYCHIK V.P.
DEMESHEVA, G.A.; IVANCHIKOVA, E.I.; KRIVOSHAPKIN, M.A.; LEYCHIK, V.M.;
OVSYANKINA, V.I.; PEKTIISTOVA, V.P.; TSINMAN, M.Z.; BEKKULOVA, S.N.;
SUBKHANBERDINA, K.Kh.; RUBAKOV, P.I., laureat Stalinskoy premii,
spetsial'nyy redaktor; BALANINA, O.V., kandidat sel'skokhozyaystven-
nykh nauk, spetsial'nyy redaktor; SAKHAROVA, V.M., spetsial'nyy
redaktor; KOSENKO, V.V., spetsial'nyy redaktor; ZHIZNEVSKIY, F.V.,
otvetstvennyy redaktor; BURLACHENKO, L.A., redaktor; ALFEROVA, P.V.,
tekhnicheskoy redaktor

[Experience of agricultural leaders of Kazakhstan; an annotated
bibliography] Opyt peredovikov sel'skogo khoziaistva Kazakhskoi SSR;
annotirovannyi ukazatel' literatury. Alma-Ata, 1955. 290 p. (MLRA 9:12)

1. Akademiya nauk Kazakhskoy SSR, Alma-Ata. TSentral'naya nauchnaya
biblioteka. 2. TSentral'naya nauchnaya biblioteka Akademii nauk
Kazakhskoi SSR. (for Demesheva, Ivanchikova, Krivoshekin, Leychik,
Ovsyankina, Peoktistova, TSinman)
(Bibliography--Kazakhstan--Agriculture)

SLAVOROSOV, A.Kh., gorn. inzh. [translator]; LEYCHIK, V.M., [translator].
KIREYEV, M.D., kand. tekhn. nauk, otv. red.; LOMILINA, L.P., tekhn. red.

[Mechanization of the cutting and loading of coal in the chamber
and pillar system] Mekhanizatsiia otboiki i pogruzki uгля pri
kamerno-stolbovoi sisteme razrabotki; trudy kongressa. Moskva,
Ugletekhizdat, 1958. 266 p. (MIRA 11:11)
(Coal mines and mining)

B'YAZHI, P. [Biaggi, P.]; LEYCHIK, V.M. [translator]; ZAK, G.I. [translator];
DMITRIYEVA, L.N., red.izd-va; BERESLAVSKAYA, L.Sh., tekhn.red.;
KOROVENKOVA, Z.A., tekhn.red.

[Conveyers with rubber belts] Konveiery s rezinovoi lentoi. Moskva,
Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1959. 293 p.
Translated from the French. (MIRA 13:12)
(Conveying machinery)

LEYCHIK, V.

An underground record. IUn. tekhn. 3 no.8:14-15 Ag '59.
(MIRA 12:12)

1. Starshiy inzhener instituta Tsentral'nogo nauchno-issledovatel'skogo
instituta Podzemshakhtostroy.
(Mining engineering--Technological innovations)

DONIN, B., inzh.; KHYS'KO, A., inzh.; LEYCHIK, V., inzh.; LASHKAREV, V.,
inzh.

Devices and instruments for automatic signalization of over-
heaping and blocking of transportation tubes. Muk.-elev.
prom. 25 no.9:17-19 S '59. (MIRA 12:12)

1. Odesskiy proyektno-konstruktorskiy institut kompleksnoy
avtomatizatsii pishchevykh predpriyatiy.
(Signals and signaling)

BYDEROVSKIY, S.I., inzh.; GLADUN, I.N., inzh.; SHAVKUN, B.I.; LEYCHIK, V.M.

Record-speed shaft sinking at the Vaal Reef mine. Shakht.stroi.
4 no.2:30-32 F '60. (MIRA 13:5)
(South Africa, Union of --Shaft sinking)

LEYCHIK, V.Ya., inzh.; PROKOPENKO, N.F.; SHLAFER, I.M.

Equipping standard butchers with pneumatic pickups. Mekh.i
avtom.proizv. 15 no.8:43-45 Ag '61. (MIRA 14:9)
(Pneumatic control)

LEYCHITSKIY, G.M.; NISHCHENKOV, V.N.

Fully mechanized painting of washing machines in a high-voltage electric field, and their drying. Lakokras.mat.1 ikh prim. no.5:40-42 '60.
(MIRA-13:11)

(Washing machines--Painting)

LYMZIN, V.N.; LEYDER, A.G.; BELOPUKHOV, A.K.

Increasing the dimension stability of polyamide separators for
antifriction bearings. Plast.massy no.8:64-67 '61. (MIRA 14:7)
(Bearings (Machinery)) (Polyamides)

LEYDERMAN, A.Ye.

Equipment used for high-frequency communications in mines.
Biul. tekhn.-ekon. inform. no.8:4-7 '58. (MIRA 11:10)
(Radio in mining)

ANFILOV, A.A., inzh.; BAKALEYNIK, Ya.M., inzh.; BIRGER, G.I.,
inzh.; BRUK, B.S., inzh.; BUROV, A.I., inzh.; GINZBURG, V.L.,
inzh.; ZABELIN, V.L., inzh.; ZAPLECHNYI, Ye.G., inzh.; ISAYEV,
D.V., inzh.; KLIMOVITSKIY, A.M., inzh.; KRYUCHKOV, V.V., inzh.;
KOTOV, V.A., inzh.; LEYDERMAN, A.Ye., inzh.; PODGOYETSKIY,
M.L., inzh.; SAZHAYEV, V.G., inzh.; SEVAST'YANOV, V.V., inzh.;
FILIPPOV, S.F., inzh.; FROMBERG, A.B., inzh.; SHNEYEROV, M.S.,
inzh.; ERLIKH, G.M., inzh.; VERKHOVSKIY, B.I., red.; ZUBKOV,
G.A., red.; KARKLINA, T.O., red.; OVCHARENKO, Ye.Ya., red.;
ANTONOV, B.I., ved. red.

[New means of automatic and centralized control for nonfer-
rous metal mines] Novye sredstva avtomatizatsii i dispetcher-
skogo upravleniia dlia rudnikov tsvetnoi metallurgii. Moskva,
Nedra, 1965. 93 p. (MIRA 18:4)

VCTOLOVSKAYA, D.Ya., inzh.; LEYDERMAN, A.Ye., inzh.; FEYGIN, V.K., inzh.

High-frequency communications in underground mines. Gor. zhur.
no. 5:50-54 Je '61. (MIRA 14:6)

1. Tsvetmetavtomatika, Moskva.
(Mine communications)

24(3)

AUTHOR: Leyderman, A. Yu.

SOV/166-59-2-8/11

TITLE: The Exiton-Mechanism of the Negative Photoelectric Effect
(Eksitonnyy mekhanizm otritsatel'nogo fotoeffekta)

PERIODICAL: Izvestiya Akademii nauk Uzbekskoy SSR, Seriya fiziko-matematicheskikh nauk, 1959, Nr 2, pp 58-69 (USSR)

ABSTRACT: The author joins the investigations [Ref 4,5,6] of the so-called exciton-mechanism of the negative photoelectric effect. He investigates the possibility to reach a negative effect in semiconductors by irradiation with monochromatic light out of the fundamental strip. The theoretical investigation of the proposed model shows that the model represents exactly the kinetics of the process as well as the dependence of the conductivity on the temperature and the mixtures. A series of formulas for the determination of the appearing parameters is deduced. The author thanks G.M. Avak'yants for the leading of the work.
There are 3 figures, and 8 references, 7 of which are Soviet, and 1 German.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN Uz SSR (Physico-Technical Institute AS Uz.SSR)

SUBMITTED: September 20, 1958
Card 1/1

24(3) SOV/166-59-6-8/11
AUTHORS: Leyderman, A.Yu., Karageorgiy-Alkalayev, P.M.
TITLE: On the Application of a Semiconductor¹ Scheme With an Impurity Level for the Explanation of the Effects of Cancellation of the Photoconductivity¹ and of the Photoactivation
PERIODICAL: Izvestiya Akademii nauk Uzbekskoy SSR, Seriya fiziko-matematicheskikh nauk, 1959, Nr 6, pp 60 - 71 (USSR)
ABSTRACT: With the aid of a semiconductor scheme with an impurity level the authors try to give a qualitative explanation for the cancellation of the photoconductivity and the photoactivation. They conjecture that the cancellation is an appearance identical to the negative photoelectric effect. The consideration is essentially carried out with the aid of the investigations of A.D. Shneyder [Ref 1,2,7]. There are 6 figures, and 9 references, 4 of which are Soviet, and 5 American.
ASSOCIATION: Fiziko tekhnicheskii institut AN Uz SSR (Physico-Technical Institute AS Uz SSR)
SUBMITTED: January 23, 1959

Card 1/1

24758

S/166/61/000/001/005/005
B112/B203

9.4160

AUTHOR: Leyderman, A. Yu.

TITLE: Negative photoeffect on a metal semiconductor contact

PERIODICAL: Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya
fiziko-matematicheskikh nauk, no. 1, 1961, 54-64

TEXT: The author studies the contact between an n-type semiconductor and a metal. The scheme of the contact is shown in the figure. On illumination, the number of ionized donors decreases while the number of holes in the valence band increases. The basic equations form a system:

$$\left. \begin{aligned} \frac{dN}{dz} &= Ny + \varphi \\ \frac{dz}{dz} &= -zy - \frac{\lambda - \varphi}{k} \\ \frac{dy}{dz} &= N - z - D \\ \frac{dz}{dz} &= A^0 (Nz - b) + \alpha A' (z - b') \end{aligned} \right\} \quad (1)$$

Card 1/4

24758

S/166/61/000/001/005/005

B112/B203

Negative photoeffect on a metal ...

The author considers thick semiconductors and, therefore, writes:

$$\frac{dN}{dz} = 0, \quad \frac{dz}{dz} = 0, \quad \frac{dy}{dz} = 0, \quad \frac{d\varphi}{dz} = 0.$$

He solves system (1) generally, and discusses his formulas thoroughly. He summarizes his results as follows: (1) The permeability of the barrier depends in a high degree, for any type of carriers on the circumstance what carriers prevail in the current. (2) If the barrier lets through few holes, i.e., if a current of majority carriers prevails, the ratio of dark and light resistance is given by the expression:

$$\frac{R_0}{R} = \sqrt{\frac{n_1 - n}{n_1}} e^{\left[\frac{e^{1/2} (4+n_1)^{1/2}}{e^{1/2} (47)^{1/2}} 2^{1/2} |\psi - \psi_n|^{1/2} (1-D)^{1/2} + 3\sqrt{2} |\psi - \psi_n| (1-\sqrt{D}) \right]}. \quad (14)$$

in a general form, and, under certain conditions, a negative photoelectric effect is possible. Short-circuit current and photo-emf have, in this case, normal sign. An expression similar to (14) holds for a semiconductor with unipolar conductivity. Short-circuit current and photo-emf have, in this case, anomalous sign. (3) If the barrier does not let through electrons, i.e., if a current of holes prevails, an illumination always effects an increase in the return current. Short-circuit current

Card 2/4

24758

Negative photoeffect on a metal ...

S/166/61/000/001/005/005
B112/E203

and photo-emf have, in this case, normal sign. The present paper was written under the supervision of Professor G. M. Avak'yanets. The author mentions A. V. Ioffe, A. F. Ioffe, and B. Davydov. There are 1 figure, 1 table, and 4 Soviet-blqc references.

ASSOCIATION: Fiziko-tehnicheskii institut AN UzSSR (Physicotechnical Institute AS Uzbekskaya SSR)

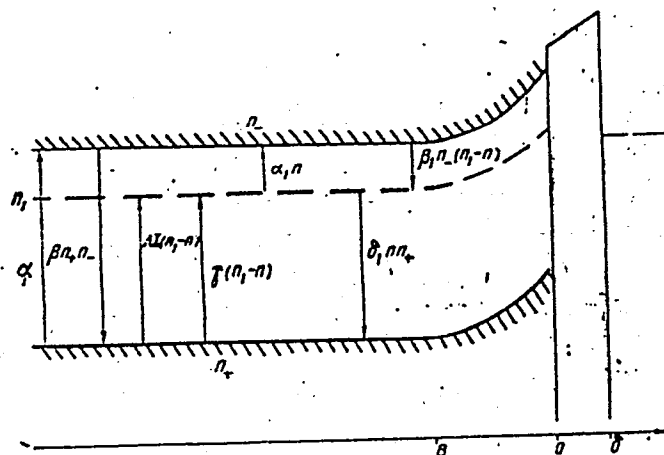
SUBMITTED: June 23, 1960

Card 3/4

Negative photoeffect on a metal ...

24758
S/166/61/000/001/005/005
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Figure



Card 4/4

29056
S/166/61/000/005/002/004
B125/B102

24,2600(1137,1138,1147)

AUTHORS: Karageorgii-Alkalayev, P. M., Leyderman, A. Yu.

TITLE: Contribution to the theory of negative photodiode effect

PERIODICAL: Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 5, 1961, 68 - 77

TEXT: The authors have investigated a sharp p-n junction, the n-region of which is bounded by a contact with a metal. In addition to strongly ionized impurities, the p- and n-regions contain "deep" impurities. If light is allowed to act only on the deep impurity levels, the system

$$\frac{d}{dx} j_n = \alpha_1 n_1 - \beta_1 n (N_1 - n_1) + \gamma_2 (N_2 - n_2) - \delta_2 n_2 n + \alpha - \beta n p +$$

$$+ A (N_3 - n_3), \quad (1)$$

$$\beta_1 n (N_1 - n_1) - \alpha_1 n_1 + \gamma_1 (N_1 - n_1) - \delta_1 n_1 p = 0, \quad (2)$$

$$\beta_2 p (N_2 - n_2) - \alpha_2 n_2 + \gamma_2 (N_2 - n_2) - \delta_2 n_2 n + A (N_3 - n_3) - C n_2 = 0, \quad (3)$$

Card 1/7

29056 S/166/61/000/005/002/004
B125/B102

Contribution to the theory...

$$\frac{dE}{dx} = \frac{4\pi e}{\epsilon} \left[p - n + (N_1 - n_1) - ((N_2) - n_2) \right], \quad (4)$$

$$\frac{dn}{dx} = -n \frac{eE}{kT} + j_n / \vartheta_n, \quad (5)$$

$$\frac{dp}{dx} = p \frac{eE}{kT} - j_p / \vartheta_p. \quad (6)$$

describes the behavior of semiconductor carriers, and therefrom one finds the hole concentration on the deep impurity levels. Low concentrations of free carriers in the region of volume charge are given by the Poisson equation

$$\frac{dE}{dx} = \frac{4\pi e}{\epsilon} N_1^n B_n, \quad (8)$$

$$B_n = 1 + \frac{N_2/N_1}{1 + \frac{\beta_2 B_+}{\beta_1 B_-} e^{\frac{\vartheta - 2\vartheta_1}{kT}}} +$$

with

Card 2/76

Contribution to the theory...

29056 S/166/61/000/005/002/004
B125/B102

$$+ \frac{\left(A \frac{\beta_2 B_+}{\delta_2 B_-} e^{\frac{\beta_2 - 2\beta_1}{kT}} - C \right) \frac{1}{\delta_2 B_-} e^{\frac{\beta_2 - \beta_1}{kT}} N_2/N_1}{\left(1 + \frac{\beta_2 B_+}{\delta_2 B_-} e^{\frac{\beta_2 - 2\beta_1}{kT}} \right) \left(1 + \frac{\beta_2 B_+}{\delta_2 B_-} e^{\frac{\beta_2 - 2\beta_1}{kT}} + \frac{A + C}{\delta_2 B_-} e^{\frac{\beta_2 - \beta_1}{kT}} \right)} \quad (9)$$

for deep donor-type impurities and with

$$B_0 = 1 - \frac{N_2/N_1}{1 + \frac{\delta_2 B_-}{\beta_2 B_+} e^{-\frac{\beta_2 - 2\beta_1}{kT}}}$$

$$- \frac{\left(C \frac{\delta_2 B_-}{\beta_2 B_+} e^{-\frac{\beta_2 - 2\beta_1}{kT}} - A \right) \frac{1}{\beta_2 B_+} e^{\frac{\beta_2}{kT}} N_2/N_1}{\left(1 + \frac{\delta_2 B_-}{\beta_2 B_+} e^{-\frac{\beta_2 - 2\beta_1}{kT}} \right) \left(1 + \frac{\delta_2 B_-}{\beta_2 B_+} e^{-\frac{\beta_2 - 2\beta_1}{kT}} + \frac{A + C}{\beta_2 B_+} e^{\frac{\beta_2}{kT}} \right)} \quad (10)$$

for deep acceptor-type impurities. A quasineutral region is assumed to exist for the recombination coefficients a) $a_2 > \beta_2 p > \gamma_2$, $a_2 > \delta_2 n$ and

b) $\delta_2 n > a_2 > \beta_2 p > \gamma_2$. The lifetime of the minority carriers is greater if
Card 3/76

27056 S/166/61/000/005/002/004
B125/B102

Contribution to the theory...

the deep impurities are illuminated than it is in the case of darkness. The boundary condition valid on the contact is given. The n-region is assumed to be about as large as, or smaller than, the diffusion length of the minority carriers and the dimensions of the p-region are assumed to be much larger than the diffusion length. Then, the total current passing through the p-n junction is practically equal to the hole current.

$$\frac{I}{e} \approx \frac{q_p \left[p_n^0 \left(e^{\frac{eV}{kT}} - 1 \right) - \Delta p \right]}{w - x_1^0 + \int_0^{x_1} \exp \left(-\frac{e}{kT} \int_{x_1}^u E dx \right) du} \quad (20)$$

is valid for $w < L_p$ (thin diode). The influence of light decreases the inverse current passing through a p-n junction at sufficiently high inverse voltages. If the n-region is filled with a space charge (model of a chemical barrier layer),

$$-\frac{I}{e} = q_p p_n^0 e^{\frac{e}{kT} \int_0^w E_0 dx} \exp \left\{ \frac{ed}{kT} [E_0(w) - E(w)] \right\} \cdot \frac{1}{\int_0^w \exp \left(-\frac{e}{kT} \int_{x_1}^u E dx \right) du} \quad (24)$$

Card 4/X₆

29056

S/166/61,000/005/002/004

B125/B102

Contribution to the theory...

will hold for high surface-recombination rates. In the case of sufficiently great inverse shifts, illumination from the region of impurity absorption decreases the inverse current. V. I. Murygin (DAN UzSSR, 1957,2) found a similar phenomenon with Se photoelements. A comparison of the results derived from this model with the peculiarities of the negative photodiode effect leads to the following conclusions:

- 1) The dependence of the inverse current on the applied voltage remains the same in darkness and under action of light.
- 2) If the activation energy of the deep impurities affected by light is properly chosen, the light-induced variation of the concentration of the ionized impurities will decrease strongly with increasing temperature. The present model leads to an upper temperature limit of the negative photodiode effect.
- 3) The neutralization of a certain quantity of ionized impurities under the action of light extends the volume charge of the p-n junction into the p-region.
- 4) The spectral properties of the negative photodiode effect reveal the impurity character of this phenomenon.
- 5) The lux-ampere characteristic of the negative photodiode effect tends toward saturation of a hyperbolic type. In the authors' opinion, the present model gives a sufficient description of the principal features of the negative photo-

Card 5/8,
6

Contribution to the theory...

29056
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B125/B102

diode effect. There are 3 figures and 12 references: 11 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: Shokley W., Read W.Phys.Rev., 1952, 87, 835. 41

ASSOCIATION: Fiziko-tekhnicheskii institut AN UzSSR (Physicotechnical Institute, AS Uzbekskaya SSR)

SUBMITTED: May 18, 1961

Card 6/7₆

L 11045-63

EWG(k)/EWT(1)/BDS/EEC(b)-2 AFTC/ASD/ESD-3 Pz-4 AT/IJP(C)

ACCESSION NR: AT3002980

S/2927/62/000/000/0052/0060

65
64

AUTHOR: Ayak'yants, G. M.; Karageorgiy Alkalayev, P. M.; Leyderman, A. Yu.

TITLE: Effect of adhesion levels on the current-voltage characteristic of a long diode at high injection levels
[Report at the All-Union Conference on Semiconductor Devices, Tashkent, 2-7 October, 1961]

SOURCE: Elektronno-dy*rochny*ye perekhody* v poluprovodnikakh. Tashkent, Izd-vo AN UzSSR, 1962, 52-60

TOPIC TAGS: long semiconductor diode, semiconductor diode adhesion level

ABSTRACT: An asymmetrical p-n junction²¹ is theoretically considered in which the p-band is alloyed to a much greater degree than the n-band. A purely hole current is assumed through the p-n junction. The W. Shockley and W. Read formula (Phys. Rev. 87, 835, 1952) is discussed, and the depth of the hole-adhesion level is determined for two limiting cases. The current-voltage characteristic is subdivided into four sections: (1) a moderate-injection-level zone, (2) a higher current zone, (3) a current zone when the number of holes in the adhesion levels equals the number of the levels, and (4) a high-injection-level zone. Each zone is discussed, Card 1/7, and formulas supplied. Academy of Sciences UzSSR Tashkent State Univ.

L 13062-63

BDS

ACCESSION NR: AT3003008

S/2927/62/000/000/0224/0228

AUTHOR: Loyderman, A. Yu.

TITLE: Effect of illumination on the reverse current in semiconductor diodes
[Report of the All-Union Conference on Semiconductor Devices held in Tashkent from
2 to 7 October 1961]

SOURCE: Elektronno-dy*rochny*ye perekhody* v poluprovodnikakh. Tashkent, Izd-vo
AN UzSSR, 1962, 224-228

TOPIC TAGS: semiconductor diode, illumination effect

ABSTRACT: A thoretical analysis of the problem based on the work of Tolpy*go and
Rashba (Trudy* IF AN UkrSSR, 7, Kiev, 1956) is presented. An illuminated
n-semiconductor contact with a metal or chemical barrier layer which has shallow-
seated highly ionized impurities is considered. Formulas for the current-voltage
characteristic, the short-circuit current, and the photo-emf are developed and
discussed. Orig. art. has: 2 figures, 24 formulas, and 1 table.

ASSOCIATION: Akademiya nauk SSSR (Academy of Sciences SSSR); Akademiya nauk
Uzbekskoy SSR (Academy of Sciences UzSSR); Tashkentskiy gosudarstvenny*y

Card 1/2

L 12987-63

EWI(1)/EWG(k)/BDS/EEC(b)-2

AFTIC/ASD/ESD-3

Pz-4

AT/LJP(C)

ACCESSION NR: AT3003000

S/2927/62/000/000/0176/0182

AUTHOR: Karageorgiy-Alkalayev, P. M.; Leyderman, A. Yu.

TITLE: Theory of negative photodiode effect [Report of the All-Union Conference on Semiconductor Devices held in Tashkent from 2 to 7 October 1961]

SOURCE: Elektronon-dy*rochny*ye perekhody* v poluprovodnikakh. Tashkent, Izd-vo AN UzSSR, 1962, 176-182

TOPIC TAGS: semiconductor negative photodiode effect, selenium photocell, negative photodiode effect

ABSTRACT: In Ge-photocells, the light-determined component of the output current is independent of the reverse bias. However, in Se-photocells the component is variable and negative at a sufficiently high reverse bias (the "negative photodiode effect"). The article offers a theoretical investigation of the above effect with an assumption that it is due to a luminous action on impurities in the space-charge region. Differential equations describing the behavior of carriers are set up, solved, and investigated with these conclusions: (1) the shape of the reverse current-applied voltage curve is the same for both light and dark conditions; (2) an upper temperature limit of the negative photodiode effect exists and depends on the energy of activating the deep impurities; (3) illumination causes an

Card 1/2

L 12987-63

ACCESSION NR: AT3003000

2

expansion of the space-charge region of p-n junction into the p-region; (4) the spectral characteristic of the negative photodiode effect clearly reveals its impurity-determined nature; (5) the light-determined component of the ionized-impurity concentration in the space-charge region tends to approach a hyperbolic-type saturation. It is found that the above conclusions are corroborated by the experimental results obtained by V. I. Mury*gin (Fotoelektricheskiye i opticheskiye yavleniya v poluprovodnikakh. Trudy* I Vsesoyuznogo soveshchaniya po fotoelektrichskim i opticheskim yavleniyam v poluprovodnikakh, Kiev, 1959). Orig. art. has: 3 figures and 18 formulas.

ASSOCIATION: Akademiya nauk SSSR (Academy of Sciences SSSR) Akademiya nauk Uzbekskoy SSR (Academy of Sciences UzSSR) Tashkentskiy gosudorstvennyy universitet (Tashkent State University)

SUBMITTED: 00

DATE ACQ: 15May63

ENCL: 00

SUB CODE: 00

NO REF SOV: 005

OTHER: 000

Card 2/2

LEYDERMAN, A. Yu.

Theory of impact ionization in p - n junctions. Izv. AN Uz. SSR.
Ser. fiz.-mat. nauk 6 no.3:32-38 '62. (MIRA 15:8)

1. Fiziko-tehnicheskiy institut AN UzSSR.
(Junction transistors) (Ionization)

ACCESSION NR: AP4038418

S/0166/64/000/002/0031/0037

AUTHOR: Leyderman, A. Yu.; Karageorgiy-Alkalayev, P. M.

TITLE: On the theory of a semiconductor diode with a turn-on back contact

SOURCE: AN UzSSR. Izv. Seriya fiziko-matematicheskikh nauk, no. 2, 1964, 31-37

TOPIC TAGS: semiconductor diode, back contact, diode theory

ABSTRACT: The authors calculated the VA characteristics of a diode with a turn-on back contact. The calculations are based on the expressions for the electron stream across the boundary between a semiconductor and metal

$$j_p(d) = s_p(p(d) - p^0(d)) \quad (1)$$

$$j_n(d) = s_n(n(d) - n^0(d)) \quad (2)$$

By means of mathematical arguments, the authors concluded that the nonhomogeneous conditions on the back contact and the p-n junction might lead to an increase in the speed of carrier recombinations on the contact, as well as to a drop of its volume. The authors take this opportunity to express their gratitude to Prof.

Card 1/2

ACCESSION NR: AP4038418

G. M. Avak'yan for his interest in their work and for the fruitful discussion.
Orig. art. has: 1 figure and 38 formulas.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UzSSR, Tashkentskiy gosuniversitet
inm. V. I. Lenina (Physicotechnical Institute AN UzSSR, Tashkent State University)

SUBMITTED: 02Jul63

DATE ACQ: 05Jun64

ENCL: 00

SUB CODE: EC

NO REF SOV: 007

OTHER: 002

Card. 2/2

LEYDERMAN, A.Yu.

Theory of calculating the volt-ampere characteristics of a semiconductor diode in the presence of trapping levels. Izv.

AN Uz. SSR. Ser. fiz.-mat. nauk 8 no. 6: 89-91 '64.

(MIRA 18:3)

1. Fiziko-tehnicheskii institut AN UzSSR.

RECEIVED AT
ACCESSION NR. AP4044795

0/0100/02.000 000 000

Chapter 1. The theory of a semi-conductor

1964

14
type TAGS diode semi-conductor construction, semi-conductor diode, rear contact
monohmic contact
+ time, located in the plane

ABSTRACT: The authors consider l-h transitions of the $n-n^+$ type, located in the plane $x=0$ and not limiting the motion of electrons through this plane; i.e., the drop in voltage on transition is given by:

U 0700-05

ACCESSION NR: AP4044796

With predominant leakage through the holes in the $n-n^+$ barrier,

$$I = I_0 e^{\frac{qV}{kT}}; c = \frac{\text{ch } \frac{w}{L_p}}{b\gamma} + 2. \quad (3)$$

Transition from characteristics (1) to (2) takes place when there is an increased current flowing through the diode due to an increased probability of leakage. In this case, the authors suggest a new design of the diode structure, which is shown in Fig. 1, b.

the degree of filling of the base is determined by the concentration of adhesion centers and the distribution of their levels. However, when leakage of holes through the $n-n^+$ barrier predominates, the degree of filling of the base is determined by the structure of the diode.

L 6766-65
ACCESSION NR: AP4044796

through a region with negative resistance. The properties of this device allow it to be
controlled by means of light. The device is a thin film device which is
a result of the interaction of light and the material.

LEYDERMAN, A.Yu.; KARAGEORGIY-ALKALAYEV, PLM.

Effect of blocking contact on the volt-ampere characteristic of a
semiconductor diode. Izv. AN Uz. SSR. Ser. fiz.-mat. nauk 8 no.1:
94-95 '64. (MIRA 17:6)

1. Tashkentskiy gosudarstvennyy universitet im. V.I. Lenina.

ACCESSION NR: AP4038618

S/0109/64/009/004/0670/0675

AUTHOR: Avak'yants, G. M.; Leyderman, A. Yu.

TITLE: Effect of the rate of recombination in a nonrectifying electrode upon the current-voltage characteristic of an abrupt p-n junction

SOURCE: Radiotekhnika i elektronika, v. 9, no. 4, 1964, 670-675

TOPIC TAGS: semiconductor, semiconductor device, pn junction, current voltage characteristic, recombination rate

ABSTRACT: An estimation of the finite rate of recombination in the ohmic contact of a long diode was not made rigorously enough by D. A. Aronov (Izv. AN UzSSR, Ser. fiz-mat. n., 1960, no. 6, p. 68). The present article offers a rigorous method for calculating the current-voltage characteristic of a diode with a finite rate of recombination of minority carriers in the back contact which is assumed to be nonrectifying. i.e., noncreating a space charge in the near-contact region.

Card 1/2

LEYDERMAN, A.Yu.; KARAGEORGIY-ALKALAYEV, P.M.

Effect of an anti-locking contact on the voltage-current characteristics of a semiconductor diode. Radiotekh. i elektron. 9 no. 10:1868-1874 0 '64.

(MIRA 17:11)

LEYDERMAN, A.Yu.; KARAGEORGIY-ALKALAYEV, P.M.

Theory of a semiconductor diode with nonohmic rear contact.
Izv. AN Uz. SSR Ser. fiz.-mat. nauk 8 no.3:73-74 '64.

(MIRA 17:10)

1. Tashkentskiy gosudarstvennyy universitet imeni Lenina i
Fiziko-tekhnicheskiy institut AN UzSSR.

LEYDERMAN, A.Yu.; KARAGEORGIY-ALKALAYEV, P.M.

Effect of an antiblocking contact on the volt-ampere characteristics
of a semiconductor diode. Izv. AN Uz.SSR.Ser.fiz.-mat.nauk 8 no.4:37--
46 '64. (MIRA 18:3)

1. Fiziko-tekhnicheskij institut AN UzSSR.

LEYDERMAN, A.Yu.; KARAGEORGIY-ALKALAYEV, P.M.

Theory of semiconductor devices at injection levels. Izv.
AN Uz.SSR. Ser. fiz.-mat. nauk 9 no.5:80-82 '65.

(MIRA 18:11)

1. Fiziko-tekhnicheskly institut AN UzSSR. Submitted August 5,
1964.

Leiderman, A. Yu. Karageorgiy-Alkalaev, P. M.

21
2

SOURCE: Radiotekhnika i elektronika, No. 4, 1985, p. 1111

TOPIC TAGS: semiconductor, semiconductor diode, semiconductor theory

SUMMARY: Formulas are derived for plotting the current-voltage characteristic of an R-p-n-n'-P structure with these assumptions: (a) the width of the p-region is the entire n-base; (b) the continuity equation for minority carriers is linear. Variation of the intensity of electron infiltration through p-n junction and hole infiltration through n-n' junction is taken into account. If the base recombination prevails, the Hall formula $I \sim e^{V/V_T}$ holds true. If, however, some leakage over-

AP5010105

ACCESSION NR: AP5010105

...through p-n and n-n⁺ contacts, respectively, and with $c > 2$. In the case of a thin diode, the characteristic $I \sim V$ may be preceded by a ... When both contacts are leaky, the characteristic may be expressed by this formula: $I \sim V$. The authors wish to thank V. I. Staleyev for his valuable advice and discussion of the results." Orig. art. has: 1 figure and 54 formulas,

ASSOCIATION: none

SUBMITTED: 11 Feb 64

ENCL: 00

SUB CODE: EC

SELF SOV: 006

OTHER: 005

ADDITION NR: AP5011071

17/01/73/0001000/0019/0030

By: Leyferman, A. Ya.

In: Effect of adhesion level on the current-voltage characteristic of semiconductor diode

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, 1965, 29-39

TOPIC TAGS: adhesion level, semiconductor diode, voltage current characteristic, negative resistance, injection level

Summary: Adhesion level is investigated in this article as regards its effect on the current-voltage characteristic of a semiconductor diode.

Page 1/2

Document No: A101171

position in a semiconductor makes the lifetime of the holes independent of injection level. If it is assumed that the lifetime of the holes is independent of injection level, then the lifetime of the holes is independent of injection level. The lifetime of the holes is independent of injection level.

LEYDERMAN, A.Yu.; KARAGEORGIY-ALKALAYEV, P.M.

Contribution to the theory of a semiconductor diode with an
antibarrier rear contact. Radiotekh. i elektron. 10 no.4:
720-726 Ap '65. (MIRA 18:5)

L 29987-66 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD
 ACC NR: AF6012491 SOURCE CODE: UR/0181/66/008/004/1239/1245

AUTHOR: Pavlichenko, V. I.; Ryzhikov, I. V.; Knita, T. G.; Karageorgiy-Alkalayev, P. M.; Leyderman, A. Yu.

ORG: none

TITLE: Electroluminescence of silicon carbide diodes

SOURCE: Fizika tverdogo tela, v. 8, No. 4, 1966, 1239-1245

TOPIC TAGS: silicon carbide, pn junction, diode junction, volt ampere characteristic, photoelectric property, electroluminescence

ABSTRACT: The authors investigated the dependence of the intensity of electroluminescence on the current and voltage in α -SiC (types 4H, 6H, and 21R). The investigated junctions were prepared by separate and simultaneous diffusion of aluminum and boron in the n-type silicon carbide crystals, alloyed beforehand with nitrogen and boron. The results were a pnn^+ structure, with the holes injected through the p-n junctions and the electrons through the $n-n^+$ contact. The theory of the current dependence of the recombination-radiation intensity in a $p-n-n^+$ diode is briefly developed. The lux-ampere and volt-ampere characteristics of the various diodes were measured as functions of the current and voltage on the diode.

Card 1/2

L 29987-66

ACC NR: AP6012491

Most curves exhibited characteristic kinks at different values of the current, indicating that the injection of the electrons in the p region must be taken into account in order to reconcile the experimental data with the theoretical deductions. Orig. art. has: 6 figures and 15 formulas.

SUB CODE: 20/ SUBM DATE: 12Jul65/ ORIG REF: 006/ OTH REF: 007

Card 2/2 *Jo*

ACC NR: AP7001179

SOURCE CODE: UR/0166/66/000/005/0054/0062

AUTHORS: Leyderman, A. Yu.; Karageorgiy-Alkalayev, P. M.

ORG: Physicotechnical Institute, AN UzSSR (Fiziko-tekhnicheskiy institut AN UzSSR)

TITLE: Injection of electron-hole plasma in a semiconductor

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 5, 1966, 54-62

TOPIC TAGS: semiconductor theory, solid state plasma, volt ampere characteristic, electron hole, PLASMA INJECTION

ABSTRACT: The behavior of injected carriers in a semiconductor is studied theoretically. For high injection levels and the condition $p \gg N$, the following expression is derived for the diffusion-controlled approximation

$$\frac{d^2 p}{dx^2} - \frac{I [(N - F^1) \frac{dD}{dx} + p F^{11}]}{2(b+1)qD_p p^2} - \frac{p}{L_p^2} = 0$$

which, upon further simplification and the assumption

$$E \approx \frac{I}{qv_p(b+1)p}$$

reduces to

$$\left(\frac{dE}{dx}\right)^2 + \frac{kT}{qL_D^2} \frac{dE}{dx} - \frac{2}{L_D^2 L_p^2} \left(\frac{kT}{q}\right)^2 \frac{E^*}{E} = 0$$

Card 1/2

ACC NR: AP7001179

APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000929720

$$E^* = I/[qv_p(b+1)N], \quad L_D^2 = kT/(4\pi q^2 N)$$

This equation is solved for two special cases corresponding to different ratios between carrier nonequilibrium lifetime, time-of-flight of electrons, and ohmic relaxation times. Case I is given by the inequality

$$E > 8 \frac{L_D^2}{L_p^2} E^*$$

which leads to the volt-ampere characteristic given by

$$I = \frac{9}{8} qv_p \mu_n \tau \frac{N}{w^2} (V - V_0)^2$$

Case II is the inverse of Case I and leads to the volt-ampere characteristic

$$I = \frac{2000}{243} \frac{q}{4\pi} \frac{\mu_n \mu_p}{w^2} (V - V_0)^3$$

It is noted that the above equations were derived under conditions of quasi-neutrality. A similar analysis for a bimolecular recombination leads to a quadratic dependence of the current on the voltage, or

$$I = \frac{9}{4\sqrt{2}} \frac{qL_D}{kT} \frac{1}{\sqrt{MN}} \frac{qv_p(b+1)N}{w^2} V^2$$

Orig. art. has: 66 equations.

SUB CODE: 20/ SUBM DATE: 28May64/ ORIG REF: 006/ OTH REF: 009

Card 2/2

MAKEYENKO, M.M.; PROSKURIN, I.G.; ~~LEYDERMAN~~, G.I.; SOLNTSEVA, Z.V.;
NOVAK, V.A.; KARTELISHEV, V.T.; TSULIMOV, A., red.;
POLEVAYA, Ye., tekhn.red.

[Moldavian Economic Administrative Region] Moldavskii ekonomicheskii
administrativnyi raion. Kishinev, Gos.izd-vo "Kartia Moldoveniaske,"
1961. 168 p. (MIRA 14:6)
(Moldavia—Economic conditions)

LEYDERMAN, I.

← One of the best. Neftianik 6 no.8:4-6 Ag '61.

(MIRA 14:10)

1. Normativno-issledovatel'skaya stantsiya ob'yedineniya
Turkmenneft'.

(Turkmenistan--Oil fields--Production methods)

LEYDERMAN, I.I.; BAGRYANTSEVA, T.N. (Angarsk)

Case of systemic lupus erythematosus with elements of periarteritis
nodosa. Klin.med. 40 no.5:130-131 '62. (MIRA 15:8)

1. Iz terapevticheskogo otdeleniya Mayskogo lachebnogo ob"ye-
dineniya (glavnyy vrach L.B. Kotlyarova).
(LUPUS ERYTHEMATOSUS) (PERIARTERITIS NODOSA)

LEYDERMAN, I.L.; BAGRYANTSEVA, I.N.

Case of Schoenlein-Henoch's disease with aortic lesi ns. Probl.
gemat. i perel. krovi 9 no.8:50-52 Ag '64.

(MIRA 18:3)

BUDKER, S.B., inzh.; LEYDERMAN, M.I., inzh.

Hearth burners operating on liquid gas for cast iron sectional boilers.
Energ. i elektrotekh. prom. no.1:30-31 Ja-Mr '65. (MIRA 18:5)

LEYDERMAN, M.I.; GUZIY, F.Ye.

Cooling of ETMK-2700/10 electric furnace transformers. Energ. i
elektrotekh. prom. no.1:64-67 Ja-Mr '63. (MIRA 16:5)

1. Khar'kovskiy zavod "Elektrotyazhmash" imeni V.I.Lenina.
(Electric transformers--Cooling)
(Electric furnaces--Equipment and supplies)

LEYDERMAN, R.L.; SIMIONOV, Yu.F.

Over-all mechanization and automation in foundries. Lit. proizv.
no.8:39 Ag '62. (MIRA 15:11)

(Foundries--Equipment and supplies)
(Automation)

LEYDERMAN, S. kandidat tekhnicheskikh nauk.

Effect of loading and unloading time on truck productivity and
cost factors. Avt. transp. 33 no.1:9-10 Ja'55. (MLRA 8:3)
(Transportation, Automotive--Freight)(Loading and
unloading)

CHEKHOVICH, S., kandidat tekhnicheskikh nauk; LEYDERMAN, S., kandidat
tekhnicheskikh nauk; BASH, M., inzhener

Effect of operating parameters on the productivity of automobiles.
Avt.transp.33 no.8:21-23 Ag'55. (MIRA 8:12)
(Transportation, Automotive)

LEYDERMAN, S.R., dotsent.

Selecting load capacity for trucks. Trudy MADI no.10 28-32 '56.
(MLRA 10:1)

(Motortrucks)

LEYDERMAN.S.R., dotesent.

Field of use for dump trucks and trucks equipped with loading and
unloading devices. Trudy MADI no.19:46-50 '56. (MIRA 10:1)
(Dump trucks) (Motortrucks)

Leyderman
KRAMARENKO, Georgiy Vasil'yevich, dots. kand.tekhn.nauk; LEYDERMAN, S.R.,
red.; MAL'KOVA, N.V., tekhn.red.

[Automobile maintenance] Tekhnicheskoe obsluzhivanie avtomobilei.
Moskva, Nauchno-tekhn.izd-vo avtoransp. lit-ry, 1957. 370 p.
(MIRA 11:3)

(Automobiles--Maintenance and repair)

KUZNETSOV, Yevgeniy Semenovich. Prinimali uchastiye: KUROPTEV, V.T.; LEIDER-
MAN, S.R.; NOSOV, L.I.; PLEKHANOV, I.P.; PLESHAKOVA, T.I.; SALOSHIN,
N.P.; SOKOLOV, O.V.; SHIBIN, P.V.; YAKOVLEV, A.V.. MARTENS, S.L.,
red.; ZUYEVA, N.K., tekhn.red.

[Efficient conditions for the maintenance of motor vehicles and
methods for its improvement] Ratsional'nye rezhimy tekhnicheskogo
obsluzhivaniia i metodika ikh korrektirovaniia. Moskva, Avto-
transisdat. Pt.1. [Every day and the first maintenance of motor
vehicles] Ezhdnevnoe i pervoe tekhnicheskoe obsluzhivanie. 1958.
35 p. (MIRA 13:5)

(Motor vehicles--Maintenance and repair)

LEYDERMAN, S.R.,dots.

Theoretical solutions of problems in the planning of automotive
transportation. Trudy MADI no.24:91-99 '58. (MIRA 11:12)
(Transportation, Automotive)

BRONSHTEYN, L.A., dotsent; AFANAS'YEV, L.L., dotsent, BASH, M.S., dotsent;
VLASKO, Yu.M., inzh.; ZEMSKOV, P.F., inzh.; KRAMARENKO, G.V.,
dotsent; LEYDERMAN, S.R., dotsent; LIV'YANT, Ye.A., ispoln.obyazan-
nosti dotsenta; LYUBINSKIY, N.M., inzh.; NAYDENOV, B.F., inzh.;
FINKEL'SHTEYN, A.L., inzh.; KHROMOV, A.A., inzh.; CHUDINOV, A.A.,
inzh.; GOBERMAN, I.M., red.; GALAKTIONOVA, Ye.N., tekhn.red.;
DONSKAYA, G.D., tekhn.red.

[Centralized automotive freight haulage] Tsentralizovannyye pere-
vozki gruzov avtomobil'nykh transportom. Pod obshchei red. I.M.
Gobermana. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transpor-
ta i shosseinykh dorog RSFSR, 1960. 206 p. (MIRA 13:9)

1. Moscow. Avtomobil'no-dorozhnyy institut.
(Transportation, Automotive)

KUZNETSOV, Yevgeniy Semenovich: Prinimali uchastiye: RYTCHENKO, V.I.;
ORLOV, V.P.; RUBETS, D.A.; ZAYATS, T.P.; KUROPTEV, V.T.;
LEYDERMAN, S.R.; NOSOV, L.I.; SOKOLOV, O.V.; TULUKOV, G.A.;
SHIBIN, P.V. LESNYAKOV, F.I., red.; DONSKAYA, G.D., tekhn.red.

[Efficient systems of maintenance and methods for their correction]
Ratsional'nye rezhimy tekhnicheskogo obsluzhivaniia i metodika ikh
korrektirovaniia. Moskva, Avtotransizdat. Pt.2. [Second stage of
motor vehicle maintenance] Vtoroe tekhnicheskoe obsluzhivanie.
1960. 98 p. (MIRA 14:3)
(Motor vehicles--Maintenance and repair)

BRONSHTEYN, L.A., dotsent, kand.tekhn.nauk; LEYDERMAN, S.R., dotgent,
kand.tekhn.nauk

Determining optimum lifetime of the rolling stock used in
automotive transportation. Trudy MIEI no.16:144-157 '61.
(MIRA 14:12)
(Transportation, Automotive)
(Motor vehicles)

Leyderman, Ts. A.

Category: USSR/Analytical Chemistry - General Questions.

G-1

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30946

Author : Zakhariya N. F., Fuga N.A., Leyderman Ts. A.

Inst : not given

Title : Use of Chemical Reactions in Processes of Spectral Analysis

Orig Pub: Zavod. laboratoriya, 1956, 22, No 11, 1303-1306

Abstract: To eliminate the effect of composition and enhance the sensitivity of the analysis use is made of carbonization (C) and halogenation (H). C is used in determination of admixtures in oxides of high melting metals, to bind the base (spectrography is applied to the stage of evaporation of oxides) and in the determination of carbide-forming elements in ores and minerals for a preliminary driving off of admixtures (spectrography of the stage of carbide combustion). The reactions take place in an arc of direct or alternating current during evaporation of mixtures with coal powder, from carbon electrodes. H is used in the determination of

Card : 1/2

-19-

BUDKER, S.B.; BUTAYEV, O.A.; LEYDERMAN, M.I.; MELAMED, S.S.

Using gear pumps for transporting liquefied petroleum gases.
Gaz. prom. 10 no.9:19-22 '65. (MIRA 18:11)

LEYDERMAN Ts. A.

AUTHORS: Poluektov, N. S., Nikonova, M. P.,
Leyderman, Ts. A., Lauer, G. S.

75-6-6/23

TITLE: Flame Spectrophotometric Determination of Strontium in Minerals
(Opredeleniye strontsiya v rudakh po metodu spektrofotometrii
plameni).

PERIODICAL: Zhurnal Analiticheskoy Khimii, 1957, Vol. 12, Nr 6, pp. 699-703
(USSR).

ABSTRACT: By applying a flame spectrophotometer with a monochromator of the
type YM-2 with a photomultiplier and a sensitive galvanometer, stron-
tium is determined in two ways:

1 - At a higher content of strontium.

2 - At a strontium-content from 0,1 to 0,001 %.

The line 460,7 m μ with an air-acetylene-flame was used as line of
determination. The mineral is first converted into a solution by
the disintegration of alkali in order to remove the sulphates. H₃

PO₄ has an intensely extinguishing effect. The disturbing aluminum

and other elements are removed by precipitation with ammonium hydro-
xide. The disturbing effect of calcium is eliminated by adding am-

monium chloride to the photometric solution. In the case of small

Card 1/2

Flame Spectrophotometric Determination of Strontium in Minerals. 75-6-6/23

quantities of strontium, calcium oxide in a quantity of 30 mg/ml is added to the standard specimen to be analyzed. The standard solutions were produced with 1, 2, 5, 10, 20, 50, and 100 μ ml SrO. There are 4 figures, 3 tables, and 13 references, 3 of which are Slavic.

SUBMITTED: April 2, 1957.

AVAILABLE: Library of Congress.

1. Minerals-Stronium determination
2. Flame spectrophalometric-Applications

Card 2/2

ZAKHARIYA, N.F.; LEYDERMAN, TS.A.

Using solid state chemical reactions in spectrum analysis.
Report No.2: Determining certain rare elements in ores or
minerals. Fiz.sbor. no.4:358-361 '58. (MIRA 12:5)

1. Ukrainskiy filial Gosudarstvennogo nauchno-issledovatel'-
skogo instituta radkikh i malykh metallov. UkrGiredmet.
(Spectrum analysis)

LEYDERMAN, Ts. A.

17

PHASE I BOOK EXPLOITATION SOV/5747

Vsesoyuznoye soveshchaniye po redkim shchelochnym elementam. 1st, Novosibirsk, 1958.

Redkiye shchelochnyye elementy; sbornik dokladov soveshchaniya po khimii, tekhnologii i analiticheskoy khimii redkikh shchelochnykh elementov, 27-31 yanvarya 1958 g. (Rare Alkali Elements; Collection of Reports of the Conference on the Chemistry, Technology, and Analytical Chemistry of Rare Alkali Elements, Held 27-31 January, 1958) Novosibirsk, Izd-vo Sibirakogo otd. AN SSSR, 1960. 99 p. 1000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Sibirskoye otdeleniye. Khimiko-metallurgicheskiy institut.

Resp. Ed.: T. V. Zabolotskiy, Candidate of Technical Sciences; Members of Editorial Board: A. S. Mikulinskiy, Professor, Doctor of Technical Sciences, A. T. Logvinenko, Candidate of Technical Sciences, P. F. Barkova, Candidate of Chemical Sciences; Ed.: V. M. Bushuyeva; Tech. Ed.: A. F. Mazurova.

Card 1/5

Rare Alkali Elements; Collection (Cont.)

SOV/5747

17

PURPOSE : This book is intended for chemical engineers and technicians working in metallurgical and mining operations and related enterprises.

COVERAGE: The collection contains reports which deal with the physical and analytical chemistry of rare alkali elements and their compounds and their reactions with mineral ores and salts. Methods of extraction and modern analytical techniques and equipment are also discussed. No personalities are mentioned. References accompany individual articles.

TABLE OF CONTENTS:

Urazov, G. G. [Deceased], V. V. Plyushchev, Yu. P. Simakov, and I. V. Shakhno [Moskovskiy institut tonkoy khimicheskoy tekhnologii im. (M.V.) Lomonosova - Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov]. High-Temperature Modification of Spodumene 5

Plyushchev, V. Ye. [Moscow Institute of Fine Chemical Technology

Card 2/5

Rare Alkali Elements; Collection (Cont.)

SOV/5747

of Sciences USSR]. Binding Building Material From Industrial Wastes

51

Poluektov, N. S., and M. P. Nikonova. [Institut obshchey i neorganicheskoy khimii AN Ukrainskoy SSR - Institute of General and Inorganic Chemistry of the Academy of Sciences Ukrainskaya SSR]. Use of Photometry-of-Flame Methods in Analyzing Ores and Salts of Rare Alkali Metals

63

Zak, B. M. [Irkutskiy institut redkikh metallov - Irkutsk Institute of Rare Metals]. Methods of Determining Rare Elements

71

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LEYDERMAN, Yu.

Leyderman, Yu. "The use of the principle of distributed load moments in the study of the stability of plates", Doklady Akad. nauk UzSSR, No. 11, 1948, p. 8-14, (Resume in Uzbek).

So: U-3261, 10 April 53, (Letopis 'Zhurnal 'nykh Statey, No. 12, 1949).

LEYDERMAN, Yr. R.

Leyderman, Yr. R. "Rigidity of the right-angle-thread screws under tension,"
Doklady Akad. nauk UzSSR, 1948, No. 12, p. 10-13---Summary in Uz
zbek

SO: U-3566, 15 March, 53 (Lotopis 'Zhurnal 'nykh Statey, No. 14, 1949).

LEYDERMAN, Yu. R.

21331 LEYDERMAN, Yu. R. i I. SHKLANOU, R. D. O graficheskom reshenii sistemy lineynykh
algebraicheskikh uraumeniy. Doklady akad. Nauk UZSSR, 1949, No. 5, S. 2-13
Rezyume Na Uzbek. Yaz.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

LEYDERMAN, Yu. R.

"Solution of a System of Linear Algebraic Equations by the Method of Successive Approximations"

Dokl AN Uzb SSR, No 10, 1953, pp 6-9

abs

W-31098, 26 Nov 54

LEYDERMAN, YU. R.

"Proper and Forced Vibrations of Frame Systems,"
Dokl. An Uzbek SSR, No 4, pp 15-20 1954, (Uzbek resume)

The author examines the vibrations of plane frame systems with the aid of integrodifferential equations. The state of the system is determined by the totality of displacements, both normal and tangent. Using the Hilbert-Schmidt theorem the author obtains the solution for proper vibrations in series form. These also determine the solution for the case of longitudinal forces depending on time. The author concludes by examining the phenomenon of parametric resonance. (RZhMekh, No 4, 1955)

SO: Sum, No 606, 5 Aug 55

"APPROVED FOR RELEASE: Monday, July 31, 2000

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URAZBAYEV, M. T., LEYDERMAN, YU. R., AND BURNASHEV, I. A.

On the Parametric Excitation of Plane Elastic Systems

The authors present the results of an experimental investigation of a series of phenomena which arise during the parametric excitation of plane elastic rod systems. A model of the rod system under investigation was set up on a platform to which were imparted harmonic oscillations in the vertical plane. The oscillations of the system were photographed in slow motion, thus making accurate observation possible. Several frames of this film illustrate the article. (RZhMekh, No. 6, 1955) Dokl. AN Uzbek. SSR, No. 5, 1954, 9-13 (Uzbek resume).

SO: Sum. No. 744, 8 Dec 55 - Supplementary Survey of Soviet Scientific Abstracts (17)

LEYDERMAN, Yu.R.

~~Solution method for linear algebraic simultaneous equations.~~

Trudy Inst. mat. i mekh. AN Uz SSR no.13:153-158 '54. (MIRA 11:6)
(Equations, Simultaneous)

LEYDERMAN, YU. R.

Leyderman, Yu. R. -- "Statis Stability, Small Oscillations, and Parametric Resonance of Frame Systems." Acad Sci USSR, Inst of Mechanics, Tashkent, 1955 (Dissertation for the Degree of Doctor in Technical Sciences)

SO: Knizhnaya Letopis', No 24, 11 June 1955, Moscow, Pages 91-104

LEYDERMAN, Yu. R.; URAZBAYEV, M.T., otvetstvennyy redaktor; PAVLOVA, M.I.,
redaktor izdatel'stva; SHEPEL'KOV, A.T., tekhnicheskii redaktor

[Rigidity and vibration of frame structures] Ustoichivost' i kolebaniia
ramnykh konstruktsii. Tashkent, Izd-vo Akademii nauk Uzbekskoi SSR,
1955. 219 p. (MIRA 9:12)
(Vibration)

SOV/124-57-4-4667

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 4, p 115 (USSR)

AUTHOR: Leyderman, Yu. R.

TITLE: On One Method Employed in the Investigation of the Parametric Resonance Phenomena (Ob odnom metode issledovaniya yavleniya parametricheskogo rezonansa)

PERIODICAL: Tr. In-ta sooruzheniy AN UzSSR, 1955, Nr 6, pp 68-80

ABSTRACT: It is proposed that the Hill equation

$$\frac{d^2 y}{dt^2} = -\lambda A(t) y(t)$$

[where $A(t)$ is an arbitrary periodic function with period π] be solved by the method of periodic solutions each of which reduces the problem to a Fredholm integral equation. By employing well-known methods in determining the eigennumbers and eigenfunctions, the author obtains approximate values of λ for the case corresponding to flexural vibrations in a beam and isolates the first region of unstable motion, thus verifying the well-known results obtained by N. M. Belyayev

Card 1/2

On One Method Employed in the Investigation of the Parametric Resonance (cont.)

SOV/124-57-4-4667

[Ustoychivost' prizmaticheskikh sterzhney pod deystviyem peremennykh prodol'nykh sil. Inzhenernyye sooruzheniya i stroitel'naya mekhanika (Resistance to Buckling of Prismatic Rods Subjected to Variable Longitudinal Forces. Engineering Structures and Structural Mechanics of Building), Leningrad, Izd-vo "Put", 1924].

N. A. Rostovtsev

Card 2/2

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 4, p 117 (USSR) SOV/124-57-4-4684

AUTHORS: Leyderman, Yu. R., Burnashev, I. A.

TITLE: The Dynamic Stability in Pure Planar Flexure of a Beam Strip (Dinamicheskaya ustoychivost' ploskoy formy chistogo izgiba balki-polosy)

PERIODICAL: Tr. In-ta sooruzheniy AN UzSSR, 1955, Nr 6, pp 81-92

ABSTRACT: The phenomena of flexural and torsional vibrations in a beam subjected to the action of periodic moments are examined. In deriving the Hill equation, the region of unstable solutions was determined by the method described in the article by Yu. R. Leyderman (see RZhMekh 1957, Nr 4, abstract 4667). The theoretical and experimental results are compared. Apparatus and methods of conducting the experiments are described. It was established that the static component of the moment generated a weak parametric resonance at odd values of the ratio $2 \omega_u / \omega$, where ω_u is the natural frequency of the flexural oscillation and ω the excitation frequency. Strong resonance was observed at even values of that ratio.

Card 1/1

N. A. Rostovtsev

URAZBAYEV, M.T., akademik; LEYDERMAN, Yu.R.; RASSKAZOVSKIY, V.T.

Determining seismic action on buildings taking into consideration
higher forms of natural vibrations. Izv. AN Uz.SSR.Ser.tekh.nauk
no.3:55-65 '57. (MIRA 11:7)

1.AN UzSSR (for Urazbayev).
(Earthquakes and building)

LEYDERMAN, Yu.R.

Evaluating seismic forces acting on buildings. Izv. AN U.S.S.R.
Ser.tekh.nauk no.4:31-39 '58. (MIRA 11:11)

1. Institut sooruzheniy AN U.S.S.R.
(Earthquakes and building)

LEYDERMAN, Yu.R.; MANSUROV, K.M.; ZINKINA, P.G.

Method for evaluating bending moments and shearing forces due to
the action of seismic loads on a flexible structure. Sbor.nauch.-
issl.rab. TTI no.9:105-117 '60. (MIRA 15:6)
(Earthquakes and building)

URAZBAYEV, M.T., akademik; LEYDERMAN, Yu.R.; SHARAFUTDINOV, V.I.

Seismic loads in a system with two degrees of freedom. Izv.
AN Uz.SSR.Ser.tekh.nauk no.4:32-40 '61. (MIRA 15:1)

1. Institut mekhaniki AN UzSSR. 2. Akademiya nauk UzSSR
(for Urazbayev).

(Earthquakes and building)